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## WHAT IS CLAIMED IS:

1	1.	A method of transmitting data packets comprising:
2		identifying a priority of each packet of a plurality of packets to be
3	transmitted;	
4		selectively transmitting higher priority packets before transmitting lower
5	priority packets of the plurality of packets;	
6		receiving the transmitted packets;
7		smoothing the received data packets; and
8		playing-out the smoothed packets,
9		wherein, the step of selectively transmitting is performed by calculating a
10	probability of higher priority packets being delivered prior to play-out times for the	
11	higher priority packets and transmitting a packet only if this probability is greater than a	
12	set threshold	•
1	2.	The method of transmitting data packets of claim 1, further comprising:
2		determining whether sufficient time remains before a scheduled play-out
3	time of a previously not transmitted packet and, if so, transmitting the previously skipped	
4	packet.	
1	3.	The method of transmitting data packets of claim 1, wherein the step of
2	selectively transmitting is performed based on channel conditions of channels upon which	
3	the data packets are transmitted.	
1	4.	The method of data packet transmission of claim 1, wherein the step of
2	smoothing the received data packets includes storing the received packets in a smoothing	
3	buffer and generating a transmission schedule, which includes the rates at which the data	
4	packets will be played-out.	
1	5.	The method of data packet transmission of claim 4, wherein generating the
2	transmission schedule is performed based on a size of a buffer that will store received	
3	packets, available bandwidth and allowed play-out delay.	

6. The method of data packet transmission of claim 4, wherein the transmission schedule is designed so that the smoothing buffer does not overflow or underflow during play-out of the received data packets.

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- 7. The method of data packet transmission of claim 1, wherein the step of selectively transmitting performs transmission over wireless channels.
- 1 8. The method of data packet transmission of claim 1, wherein the set 2 threshold is between 0.7 and 0.9.
  - 9. The method of data packet transmission of claim 1, wherein calculating a probability of higher priority packets being delivered prior to play-out times for the higher priority packets is performed by estimating the success probability that a first data packet of the plurality of data packets will be delivered before the play-out time for the first data packet.
    - 10. The method of data packet transmission of claim 1, wherein the step of selectively transmitting transmits data from the plurality of data packets in mini-slots.
    - 11. The method of data packet transmission of claim 10, wherein calculating a probability of higher priority packets being delivered prior to play-out times for the higher priority packets is performed at an end of every mini-slot to determine whether to transmit data in a next mini-slot.
- 1 12. The method of data packet transmission of claim 11, wherein the plurality 2 of data packets are video data packets.
- 1 13. A system for data packet transmission, the system comprising:
- 2 a central transmission unit including a unit controller coupled to a unit
- 3 buffer and a unit transceiver, the unit buffer also being coupled to the unit transceiver, the
- 4 unit buffer storing a plurality of data packets for selective transmission by the unit
- 5 transceiver;
- a transmission channel that carries the plurality of data packets transmitted by the unit transceiver,
- wherein, the unit controller controls selective transmission of the plurality
  of data packets from the unit transceiver along the transmission channel to client
  equipment.
- 1 14. The system for data packet transmission of claim 13, wherein the plurality 2 of data packets are video data packets.
- 1 15. The system for data packet transmission of claim 13, wherein the client 2 equipment comprises:

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30 Docket No.: 1999-0162 3 a client transceiver that receives the selectively transmitted data packets from the unit transceiver along the transmission channel; 4 5 a client equipment controller coupled to the client transceiver to control 6 reception of the data packets; 7 a client smoothing buffer that stores the data packets under the control of 8 the client equipment controller, a client smoothing buffer being coupled to the client 9 equipment controller; and

a client data play-out mechanism that plays-out the data packets from the client smoothing buffer under the control of the client equipment controller, the client data play-out mechanism being coupled to the client equipment controller.

- 16. The system for data packet transmission of claim 15, wherein the unit controller generates the transmission schedule based on a size of the client smoothing buffer, available transmission channel bandwidth and allowed play-out delay.
  - The system for data packet transmission of claim 13, further comprising: 17. a server that provides the plurality of data packets;
- a wired channel coupled to the server that carries the plurality of data packets to a wired network from the server, the wired channel also being coupled to the central transmission unit to provide the plurality of data packets to the central transmission unit for transmission to the client equipment.
- 18. The system for data packet transmission of claim 13, wherein, the unit controller controls selective transmission of the data packets by calculating a probability of higher priority packets being delivered prior to play-out times for the higher priority packets and transmitting a packet only if its probability is greater than a set threshold.
- 19. The system for data packet transmission of claim 13, wherein the unit controller determines whether sufficient time remains before a scheduled play-out time of a previously not transmitted packet and, if so, controls the unit transceiver and unit buffer to transmit the previously skipped packet.
- 20. The system for data packet transmission of claim 13, wherein the unit controller controls selective transmission by the unit transceiver based on conditions of the wireless channel upon which the data packets are transmitted.

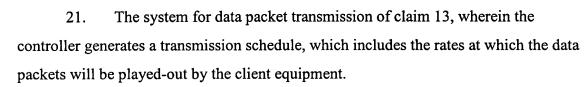
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- 1 22. The system for data packet transmission of claim 13, wherein the set 2 threshold is between 0.7 and 0.9.
- 1 23. The system for data packet transmission of claim 13, wherein the central transmission unit is a base station and the transmission channel is a wireless channel.